

CLAIMS

We claim:

1. A method for substantially predetermining gloss in a polyester resin and β -hydroxyalkylamide curative powder coating containing at least two polyester resins,
5 said method comprising:
 - a) providing a first formulation comprising a first polyester resin and β -hydroxyalkylamide resin;
 - b) providing a second formulation comprising a second polyester resin and β -hydroxyalkylamide resin, wherein said first and second polyester resins
10 have different acid values;
 - c) blending said first and second formulations together to make coating;
 - d) determining a surface gloss of the coating after application;
 - e) determining a gloss versus a percent difference in acid values correlation; and
 - f) determining an amount of at least one of said resins to be present in said
15 coating to achieve the desired gloss using said correlation.
2. The method of claim 1 further comprising determining the percent difference in the acid values between the first and second polyester resins before performing step (c).
3. The method of claim 1 wherein said polyester resin includes at least two carboxyl groups.
- 20 4. The method of claim 3 wherein said polyester resin has an acid number of 10 to 300 mg KOH/gram.
5. The method of claim 3 wherein said polyester resin has an acid number of from 15 to 80 mg KOH/gram.
6. The method of claim 1 wherein said polyester resin has a viscosity, as measured at
25 200° C., of from 1000 to about 15000 mPa.s.

7. The method of claim 1 wherein said β -hydroxyalkylamide is mixed with said polyester at a ratio of from about 0.5 to about 2 parts of hydroxy functions per one part of carboxy or anhydride function.
8. The method of claim 1 wherein said first and second formulations are blended in a
5 ratio of from 1:20 to 20:1 parts by weight.
9. The method of claim 1 wherein said first and second formulations are blended in a ratio of from 1:10 to 10:1 parts by weight.
10. The method of claim 1 wherein said first and second formulations are blended in a ratio of from 1:5 to 5:1 parts by weight.
- 10 11. The method of claim 1 wherein said first and second formulations are blended in a ratio of 1:1 parts by weight.
12. The method of claim 1 wherein said gloss versus a percent difference in acid values correlation is determined using multiple polyester resin and β -hydroxyalkylamide resin formulations at fixed parts by weight ratio.
- 15 13. The method of claim 1 wherein said gloss versus a percent difference in acid values correlation is determined using two polyester resin and β -hydroxyalkylamide resin formulations at varied parts by weight ratios.
14. The method of claim 1 wherein said gloss versus a percent difference in acid values correlation is determined using multiple polyester resin and β -hydroxyalkylamide
20 resin formulations at varied parts by weight ratios.
15. A multi-component powder coating comprising a blend of:
 - a) a first formulation comprising a first polyester resin and β -hydroxyalkylamide resin; and
 - b) a second formulation comprising a second polyester resin and
25 β -hydroxyalkylamide resin, wherein said first and second polyester resins have different acid values.

16. The coating of claim 15 wherein said polyester resin includes at least two carboxyl groups.
17. The coating of claim 15 wherein said polyester resin has an acid number of 10 to 300 mg KOH/gram.
- 5 18. A multi-component powder coating having a substantially predetermined gloss comprising:
 - a) a first formulation comprising a first polyester resin and β -hydroxyalkylamide resin; and
 - b) a second formulation comprising a second polyester resin and
 - 10 β -hydroxyalkylamide resin, wherein said first and second polyester resins have different acid values,wherein said coating is prepared by:
 - i) blending said first and second formulations together to make coating;
 - ii) determining a surface gloss of the coating after application;
 - 15 iii) determining a gloss versus a percent difference in acid values correlation;
 - iv) determining an amount of at least one of said resins to be present in said coating to achieve the desired gloss using said correlation; and
 - v) determining an amount of at least one of said resins to be present in the coating to achieve the desired gloss.
- 20 19. The multi-component dry powder coating of claim 12 wherein said first and second formulations are blended in a ratio of from 1:20 to 20:1 parts by weight.
20. The multi-component dry powder coating of claim 12 wherein said first and second formulations are blended in a ratio of from 1:1 parts by weight.